

## Product Description

This eSmart MPPT (maximum Power Point Tracking) solar charge controller is a smart solar controller with automatic recognition function, smart charging and discharging function, three stages charging function to protect battery. It can increase 30%~60% efficiency than traditional PWM controller. It supports many kinds of batteries. It also has RS232 communication function.



**Remarks:DC12V/24V/36V/48V battery system automatic recognised.**





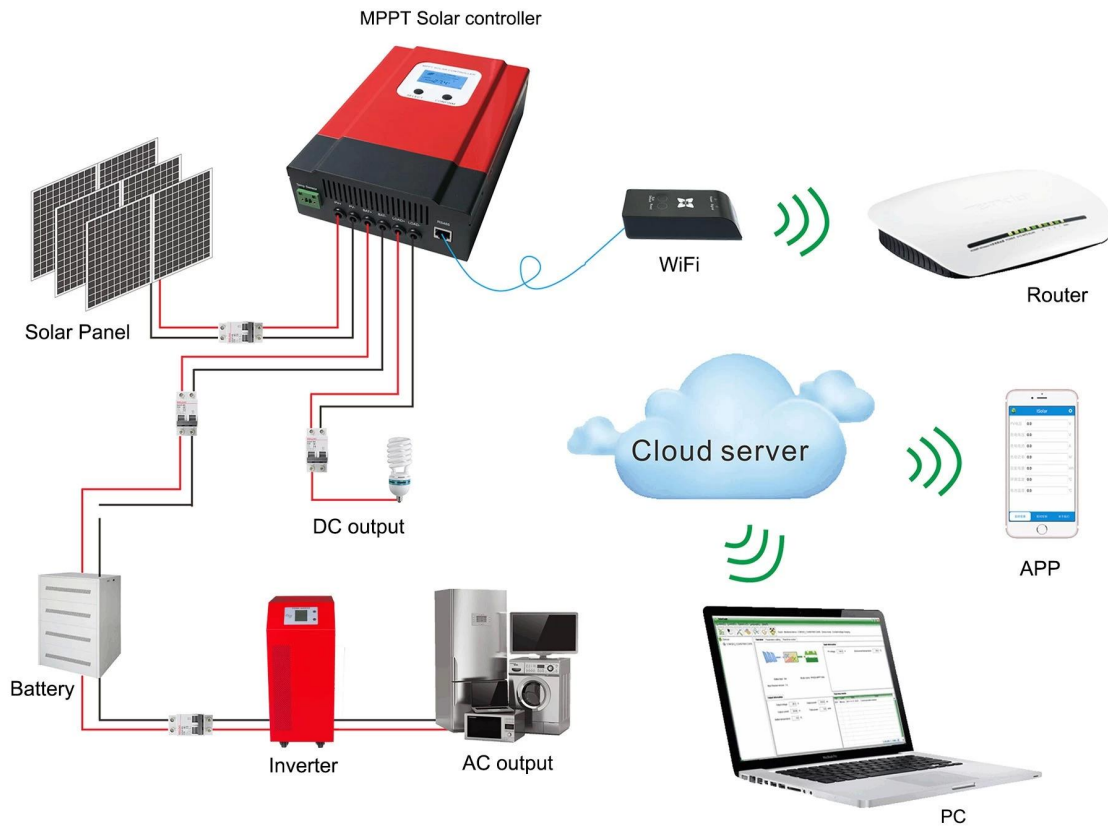




1. Bat. Temp Sensor
2. PV Terminals
3. Battery Terminals
4. Load Terminals
5. RS485 Port



# Off grid Solar System CPU



## Hot sales features

1. MPPT charging mode, peak efficiency up to 99%, saving 30%~60% solar panel than traditional PWM controller.
2. DC12V/24V/48V battery system automatic recognition, users can use it in different system conveniently.
3. Maximum PV input voltage up to DC100V.
4. Three stages charge: fast charge(MPPT), constant voltage charge, floating charge, It can protect batteries well .
5. Three option of discharge: on mode and off mode and PV voltage(solar) control mode.
6. Users can choose 4 kinds of commonly standard batteries(Sealed lead acid, Vented, Gel, NiCd). Other kinds of batteries can be defined by users.
7. Digital tube can display battery voltage and charging current. The software can display various parameters such as model number, PV input voltage, battery type, battery voltage, charging current, charging power, working condition.
8. RS232 communication, we can offer communication protocol also, it's convenient for user's integration management.
9. This controller can be paralleled infinitely.
10. CE and RoHS Certifications are approved. We can help clients to approve other certifications.
11. 2 years warranty; 3~10 years extended technical service.

## Product technical parameters

eSmart3 series	20A	30A	40A	50A	60A
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Product category	Controller Properties		MPPT (maximum power point tracking)				
	MPPT efficiency		≥99.5%				
	Standby power		0.5W~1.2W				
	System voltage		Automatic recognition				
	Heat-dissipating method		Intelligent fan cooling				
Input Characteristics	Max.PV input voltage(VOC)		DC150V				
	Start the charge voltage point Low		Battery voltage + 3V				
	input voltage protection point		Battery voltage + 2V				
	Over voltage protection point		DC150V				
	Rated PV power	12V system	260W	390W	520W	650W	780W
		24V system	520W	780W	1040W	1300W	1560W
		36V system	780W	1170W	1560W	1950W	2340W
48V system		1040W	1560W	2080W	2600W	3120W	
Charge Characteristics	Selectable Battery Types (Default Gel battery)		Sealed lead acid, Gel battery, Flooded (Other types of the batteries also can be defined)				
	Charge rated current		20A	30A	40A	50A	60A
	Charging Method		3-Stage: constant current(fast charging)-constant voltage-floating charge				
LOAD Characteristics	Load voltage		The same as the battery voltage				
	Load rated current		40A		60A		
	Load control mode		On\Off mode, PV voltage control mode,Dual-time control mode, PV + Time control mode				
Display & Communication	Display mode		High-definition LCD segment code backlight display				
	Communication mode		8-pin RJ45 port/RS485/support PC software monitoring/support WiFi module to realize APP cloud monitoring				
Other Parameters	Protect function		Input-output over \ under voltage protection, Prevention of connection reverse protection,battery shedding protection etc.				
	Operation Temperature		-20℃~+50℃				
	Storage Temperature		-40℃~+75℃				
	IP(Ingress protection)		IP21				
	Max. connection size		20mm2		30mm2		
	Net Weight (kg)		2.3		2.6		
	Gross Weight (kg)		3		3.5		
	Product Size□mm□		240*168*66		270*180*85		
	Packing Size(mm)		289*204*101		324*223*135		

## Remarks

The specification is only for reference. Subject to change without prior notice  
We provide OEM and ODM service.

## Products Package

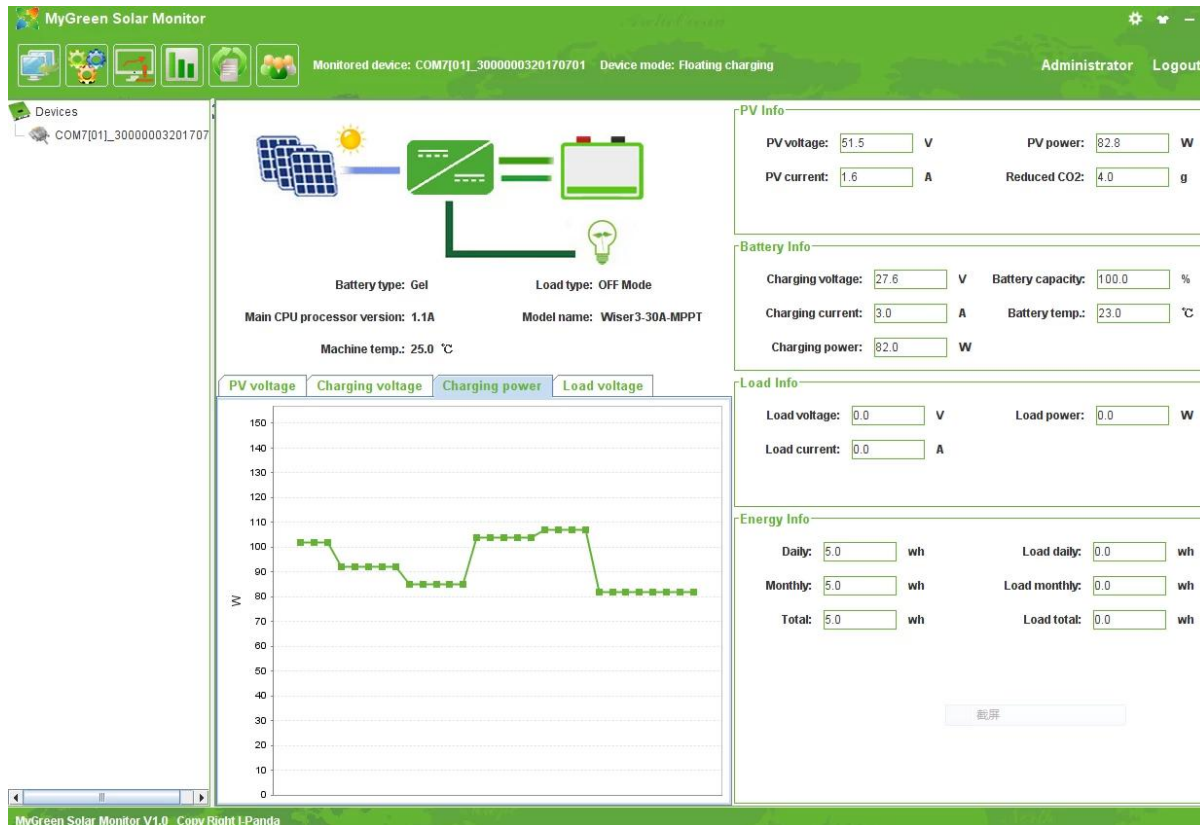
Number	quantity	Items included
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1	1 pc	Controller color (blue or green is optional OEM ODM order is highly welcome )
2	2 pc	Hangers (used for controller hanging on the wall)
3	4 set	Screw
4	1 pc	RJ45 to RS485 cable
5	1 pc	Battery temperature sensor wire
6	2 pc	Fuse DC output
7	1 pc	User instruction manual

## Controller PC upper software and testing software

1.Controller PC upper software and testing software can display information. Users can set parameters via PC upper software.





Graphical: PC upper software

1.1 The first picture show solar controller working status(charge and discharge), PV voltage, charge voltage, charge current etc. Users can choose the type of the batteries, DC-load output control method.

1.2 We provide PC upper software. Testing software is not including. (user's PC has software development platform, if needed, please apply for it)

2.1 ENTER1 button: press left ENTER1 show 2 digital battery voltage(if it is charging, then shows 2 digital charge voltage), for example,the battery voltage or charge voltage is 13.5V, it shows13,please see Figure 2.1;Press ENTER1 a little bit longer, users can set battery types.

2.2 ENTER2 button: press right ENTER2 show 2 digital battery current (if it is not charging, then it display 00, if the charge current is 22.5A, then it shows 22,please see Figure 2.2); press ENTER2 button a little bit longer, DC load control can be set (On mode, Off mode, PV voltage control mode)

Please see more details in the user manual.

## Remark:

1. All the above parameters come from our former customers' requirements, if you have special need, we can adjust the parameter for you, such as DC voltage, charging current, etc.

2.Payment terms: T/T, Western Union, Paypal

3.Delivery Terms: EX-Works

4.Delivery Time: sample 1-2 working days after payment; big order depends on the quantity;